Environmental **M**anagement (**EM**)
Applied **C**ost **E**ngineering (**ACE**) **T**eam

by

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Background

- The EM program has been challenged by Congress & Stakeholders to reduce & control costs.
- EM Project/ Program Managers must sharpen their project management skills and become more knowledgeable of cost engineering methods, cost estimating, and cost validating.
- The ACE Team was established to promote continuous cost improvements through dissemination of cost engineering tools, methods, techniques, best practices & lessons learned across the EM program.

ACE TEAM

✔ The ACE Team is a collaborative effort by DOE- EM staff from Field Offices and HQ to promote continuous improvements in the areas of cost estimating and cost collection to enhance EM Project Management.

✔ ACE Team members include:

- **EM-6 (Lead)**
- **EM-20**
- **EM-30**
- **EM-40**
- **EM-50**
- **AL**
- **CH**
- **ID**
- **NETL**
- **NV**
- **OAK**
- **OH**
- **ORO**
- **RF**
- **RL**
- **SRS**

Mission and Vision

The EM ACE Team is a joint Field-HQ group whose mission is to:

- Propose policy, standard practices, guidance, tools, and training; and act as a resource to assist Field and HQ program/project managers in the areas of cost engineering as applied to scope development, schedule development, and cost estimating.

- Promote sharing of lessons learned, cost data, and continuous improvement, standardization, and consistency of EM cost data.

ACE Team Vision includes:

- DOE-EM program/project managers, cost engineers, and cost estimators have the necessary tools, systems, and training to develop credible cost estimates, and to manage cost of EM projects and programs.

ACE Team Goals

- Increase confidence in DOE EM cost engineering capabilities by Congress, stakeholders, and regulators.
- Ensure that DOE EM Program and Project Managers have adequate and appropriate skills, training, and tools in the areas of cost estimating and cost validation, so that projects are completed within cost.
- Establish an integrated, uniform, and comprehensive system, for collecting and analyzing historical cost data.
- To facilitate the use of cost estimates to establish and defend credible baseline/budget formulation.
- Promote continuous improvement in EM project cost estimating efforts.
- Influence cost estimating policy development and implementation including issue resolution.

Objectives

- Establish capabilities to resolve cost estimating and cost engineering issues.
- Share lessons learned and exchange information between sites to enact higher standards of cost engineering, control, and evaluation throughout the EM complex.
- Establish standards and procedures for centralized collection of scope and cost data.
- Provide Field and HQ professionals training on cost estimating, cost validation, and tools, consistent with EM-6 and the Office of Engineering and Construction Management (OECM) training programs.
- Provide and maintain cost information which support EM cost estimates.
- Maintain a standardized vocabulary of terms that may be applied to cost estimates within the DOE, other Federal agencies, and commercial industry for cost comparison purposes.

Accomplishments to Date Include:

- Completed review, modification and updating of the Hazardous, Toxic, and Radioactive Waste Work Breakdown Structure (HTRW WBS), now renamed the ECES, to include waste management activities, additional technologies, and life-cycles phases of an environmental projects.
- Completed ECES user manual.
- Completed annual update of the ECES.
- Adoption of ECES and HTRW WBS by DOE sites performing environmental work.
- The development of the ***Practical Cost Estimating and Validations Lessons Learned Workshop*** and manual which are used to train project/program managers in cost estimating and other cost engineering areas. Workshops have been conducted at OAK, RL, SRS, OH, and at HQ.
- Development of five Decontamination and Decommissioning cost estimating models in Remedial Action Cost Estimating and Requirement (RACER) System.
- Training of RACER cost estimating software at several DOE sites (ORO, RL, AL, OAK, ID, SRS, NETL, and HQ).
- Coordinated the development of models and modifications to RACER with other Federal Agencies.
- Assisted with development of EM Project Management Guide, specifically, contingency and programmatic risk sections.
- Assisted with drafting the DOE Order 413.3.

Accomplishments (continued):

- Compilation of available cost estimating software or tools that may be used by EM in developing estimates.
- Assisted with identifying issues and making recommendations for innovative technology costing and collection of the cost data.
- Initiate development of Environmental Cost Analysis System to collect and analyze completed environmental projects. (http://ecas.netl.doe.gov)
- Development of environmental area cost factors for two cities (Albuquerque, NM and Chattanooga, TN)

Future Activities

- Expand ECES to allow its use as a cost management tool and to develop links with financial management and budgeting systems.
- Complete process for ECES to become an American Society for Testing and Material standard
- Annual update of the ECES to include Long-Term Stewardship and WM activities, new technologies, and other modifications.
- Complete the development and initiate the use of historical cost data compilation and analysis system known as Environmental Cost Analysis System.
- Complete development and distribution of “CostRisk” software to analyze risk based contingency, for EM projects and to provide training.
- Continue to train project/program managers in cost estimating and other cost engineering areas.
- Development of DOE specific area cost factors for environmental work.
- Develop cost estimating models, where the cost estimating software (such as RACER) is lacking in DOE needs along with area cost factors for EM sites.
- Updating of cost estimating software summary sheet which provides information on current cost estimating software and tools that can be used by EM to develop estimates.
- Provide Cost Control tools to the complex. EM Project Managers need a methodology for establishing what a project should cost, and determining if the contractor's costs stay within reasonable costs.

Future Activities (continued)

- Establish the Team as a cooperative resource and communication point to pool resources, assist Field organizations with specific cost engineering tasks, develop cost account/work breakdown structures, and share environmental management actual and estimated costs.
- Develop a web site that consolidates and centrally locates data and information useful for EM cost estimators and project/program managers.
- Provide other cost engineering assistance to and coordination with other International, Federal, DOE, and EM Teams, Offices, and Organizations.